Apparatus and method for NOx- and/or SOx-regeneration of an NOx storage catalyst

Patent number: EP1106798
Publication date: 2001-06-13
Inventor: POTT EKKEHARD DR (DE)
Applicant: VOLKSWAGENWERK AG (DE)
Classification:
- international: F01N3/08; F01N3/20
- european: F01N3/08B2; F01N3/08B10B; F01N3/20D; F02D41/02C4D1; F02D41/02C4D1A; F02D41/40D4
Application number: EP20000125381 20001201
Priority number(s): DE19991059605 19991210

Also published as:
DE19959605 (A
EP1106798 (B1)

Cited documents:
EP0903481
GB2303565
US5956942
EP0822323
EP0732485
more >>

Abstract of **EP1106798**

A diesel engine (10) has an NOx and/or COx exhaust gas (12) storage catalytic converter (18) which is regenerated by exposure to a supply of reduction agent. The reduction agent is supplied as an increased mass flow with the exhaust gas, either by a supplementary injection of fuel into the diesel engine (10) or into the exhaust system (12). An Independent claim is also included for an apparatus for the above process. Preferred Features: The supplementary injection during the regeneration is alternately activated and de-activated. The variation in fuel supply is regulated to optimize the match between burning fuel and the available oxygen. The regeneration is sub-divided into active and inactive phases, suppressing the formation of strong odors and undesirable gases especially hydrogen sulfide and ammonia. The duration of the active and/or inactive phases is regulated preferably in accordance with the sulfur load, a current lambda value, the catalyst temperature, or a defined motor operating condition. With progressive increase in the required regeneration duration, the active and/or inactive phases are progressively shortened. The volume of supplementary fuel injected during the active phases is varied according to engine load, current lambda value, catalyst temperature, or a defined motor operating parameter, and is reduced with increasing regeneration duration period.

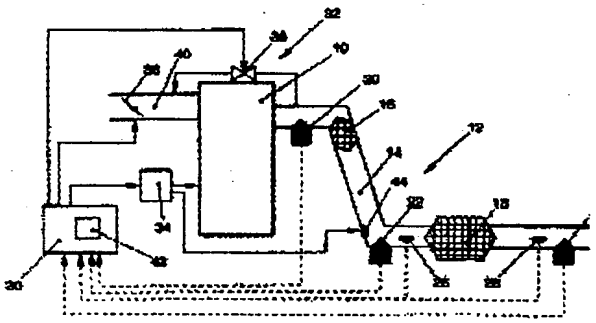

FIG. 1